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An Integrated Perspective of Multitasking and Multiple Team Membership

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ABSTRACT

Workers in today's business environments are confronted with heavy workloads that reflect not only their regular job expectations but also their involvement in multiple teams at the same time. The majority of the current literature has studied these two topics (multitasking and multiple-team membership) independently. The goal of this paper is to integrate both conceptual outlooks by examining relevant works in both streams of research and merging them into an integrated framework. By analyzing new data collected from focus groups, and taking an individual worker's perspective, the results of this study suggest that participating in multiple teams simultaneously, fragments workers assigned activities into three levels: individual, project and group. Workers handle these multiplied demands by juggling their individual and team related assignments and multitasking within levels and across levels. This juggling is influenced by situational elements such as deadlines and deliverables, and personal factors such as multitasking skill and expected outcomes. This study is the first to examine individual multitasking activity in conjunction with multiple team duties, and its results highlight an important area for further research.

Keywords: Worker workload, business environment, integrated framework, multitasking

INTRODUCTION

Contemporary work environments are characterized by collaboration and computer mediation. Although there is extensive research on the effects of group-work and computer-supported work in the modern workplace, the interaction that exists between the two deserves further exploration. Typical groupware research is focused on a single group (or assumes that people are members of one team at a time (Mortensen, Woolley, & O'Leary, 2007) and compares the effectiveness of different teams depending on the degree of virtuality as defined by Chudoba, Wynn, Lu, and Watson-Manheim (2005), or depending on the type of task, and their internal processes (Cummings, Espinosa, & Pickering, 2009).

Likewise, traditional research about computer-mediated work is centered on how people use technology individually to accomplish their jobs in general (Jaspersen, Carter, & Zmud, 2005), assuming that a single task is performed at a time. Nowadays, however, typical employees are members of more than one team at a time and must combine individual and group tasks in the performance of their job duties. The combination of Multiple Team Membership (MTM) and Multitasking opens up a relatively unexplored research field. A better understanding of the demands of both issues has implications for organizations and individuals that employ these methods, and for the design of systems and features to improve work performance.

Our level of analysis is the individual worker who faces multiple demands on her time due to her participation in one or more teams and her other individual duties. This level is consistent with most of the extant literature in Multiple Team Membership that has examined the objective or subjective outcomes associated with working on multiple teams. Similarly, the individual has been the center of attention in most of the multitasking studies situated in the workplace (Appelbaum, Marchionni, & Fernandez, 2008; González & Mark, 2005; Stephens & Davis, 2009) and elsewhere (Benbunan-Fich & Truman, 2009; Wood et al., 2012).

This paper seeks to accomplish two primary research objectives. First, we provide an overview of the rich body of literature regarding Multiple Team Membership and Multitasking in order to bring these two perspectives together. Second, we offer details of how individuals cope with multitasking and multiple team membership with insights gathered from focus groups. Based on the results of our preliminary investigation, we discuss the conditions leading up to multiple team-related demands, and the strategies that people employ to perform their work. These initial findings are aimed at creating a bridge between multitasking and multiple-team membership. Future studies need to investigate in more depth how different types of collaborative and individual computer-supported work environments interact and influence outcomes.

LITERATURE REVIEW

We draw from two different streams of literature for this review. On the one hand, we explore the issue of Multiple Team Membership from a conceptual and empirical perspective by surveying works on this topic. On the other hand, we delve into the subject of multitasking from the perspective of the individual worker who has to juggle multiple tasks in the workplace. Although multitasking has been explored in different disciplines and from different perspectives (cognitive, managerial, technological, etc.), our literature review is selective rather than exhaustive. Accordingly, we review the most relevant works from each of these areas, given the topic and the focus of this study.

Multiple Team Membership

Multiple-Team Membership (MTM) is defined as simultaneous membership in more than one team (O'leary, Mortensen, & Woolley, 2011). Although technically, teams could exist for work-related or unrelated purposes, our focus is on teams that are created within organizations to accomplish specific work-related tasks. Survey data indicates that more than half of knowledge workers surveyed from different organizations and industries belong to more than one team at the same time (Lu, Wynn, Chudoba, & Watson-Manheim, 2003; Mortensen, Woolley, & O'Leary, 2007).

MTM is prevalent in Information Technology companies particularly in software development and innovation environments (Lojeski, Reilly, & Dominick, 2007) and in other areas. For example, Gonzalez and Mark (González & Mark, 2005) indicate that “it is commonplace that information workers are involved in multiple collaborations that occur in parallel. This demands that individuals enact specific efforts to coordinate, manage and track those collaborations.” The increased workload placed on individuals due to their MTM has shown to have negative consequences. In fact, Leroy and Sproull (2004) report the results of a survey investigating the stress caused by working on multiple teams, and the effects of role ambiguity and leadership structures on that stress. Individual and team performance have been shown to benefit from a limited number of multiple team memberships due to an increased focus on working efficiently, and transfer of learning experiences from other teams. However, these benefits can taper with a greater than optimal number of team memberships because of fragmented attention (Chan, 2014). In fact, it has been found that team performance is enhanced when team members dedicate more time and attention to the team, especially for physically dispersed teams (Cummings & Haas, 2012).

Groups are tasked with projects and deadlines for their deliverable output. According to Rousseau *et al.* (2006), teamwork is characterized by four phases (preparation of work accomplishment, task-related collaborative behaviors, work assessment and team adjustment) that may occur sequentially or cyclically. The first phase consists of planning the work and deciding upon the way in which the team will proceed. The second phase is where actual collaboration takes place through communication and coordination. The last two phases correspond to the evaluative actions of the work produced and necessary adjustments to achieve the goal or desired output by the deadline.

At the onset of a project, team members decide the strategy they will follow to accomplish their work. The degree of task interdependence determines the extent to which members have to collaborate with each other to produce the expected outcomes. At low levels of interdependence, each member contributes a separate portion to the overall goal, and thus team performance is the result of the sum of the individual performances. At high levels, team performance requires a more complex integration of individual inputs, which is typically achieved by intensive information exchange (communication) and integration of participation (coordination) (Rousseau, Aube, & Savoie, 2006). Group meetings are typically used to determine working strategies and ensure collaboration among teammates. The nature of collaboration ranges from pooling individual contributions to more complex integration of individual participation. Highly complex projects require more interdependent work, while simpler projects can be carried out based on independent work. In this case, team members eventually produce the final outcome after a series of meetings to review and integrate individual members' contributions. Regardless of project complexity, the pace of work typically accelerates in the face of a looming deadline, to ensure that teams meet their goal on time (Waller, Zellmer-Bruhn, & Giambatista, 2002).

The intensity of group-related work increases in multi-project environments where members have to deal with more than one active project at a time (Zika-Viktorsson, Sundström, & Engwall, 2006). Overlapping project trajectories with close deadlines produce an increase in the work of individual team members as they have to coordinate their participation in each one of their ongoing projects. Although single-teams may experience a multi-project challenge, this situation is more

typical of multi-team environments. The complexity of dealing with multiple ongoing projects is higher when individual members must coordinate their work with different teammates. When working on more than one team, each facing close project deadlines, individuals have to allocate their time to work on multiple projects and coordinate their work with their teammates for each project.

Depending on the nature of the project, the interdependence of its activities, and the collaborative technologies available to support group work (Bertolotti, Mattarelli, Vignoli, & Macrì, 2015), a team member must wait for a response from another in order to continue with his/her work. Alternatively, team members need to wait for input from all the others in order to decide on a course of action. The scheduling and coordination of project-related activities may lead participants to work on many different project threads in the same span of time.

Individual Multitasking

Multitasking is defined as the performance of two or more tasks at the same time, either simultaneously or by interleaving them with task switching (Benbunan-Fich, Adler, & Mavlanova, 2011; Waller, 2007). Research on multitasking has been conducted in different disciplines such as management, psychology and information systems, each area with its own emphasis. In management, the focus has been on interruptions and preferences for handling multiple job demands, as well as their consequences for job performance (Bluedorn, 2002). In psychology, the literature is centered on the cognitive processes that explain task switching and account for its consequences (Payne, Duggan, & Neth, 2007; Salvucci & Taatgen, 2008). In Information Systems, research has focused on how individuals multitask with technology devices (Adler & Benbunan-Fich, 2013; Benbunan-Fich & Truman, 2009), the effects of interruptions on performance (Adler & Benbunan-Fich, 2012; Mansi & Levy, 2013) and the tendency to maintain multiple conversations at the same time or multi-communicating (Cameron & Webster, 2013).

Multitasking occurs when a user shifts attention to perform several independent but concurrent computer-based tasks. Benbunan-Fich *et al.* (Benbunan-Fich *et al.*, 2011) articulate two key principles to define multitasking, namely: task independence and performance concurrency. While the principle of independence suggests that ongoing tasks are self-contained and pursuant of different goals, the notion of concurrency implies that these multiple tasks are sharing the same temporal period. This sharing can occur either because different tasks are carried out literally at the same time (such as, for example, driving and having a conversation), or because task components are interleaved such that individuals bounce from one task to another before completing any of them. These two alternative multitasking paradigms are called simultaneous and task-switching, respectively.

Task switching is the result of either attending to external interruptions that break the flow of work, or internal decisions to stop ongoing tasks to perform another (Adler & Benbunan-Fich, 2013). There is a growing body of literature analyzing the types of interruptions (Jett & George, 2003), the drivers of internal and external interruptions and their effects on individual work (Adler & Benbunan-Fich, 2012; Gillie & Broadbent, 1989; Payne *et al.*, 2007; Speier, Vessey, & Valacich, 2003).

The prevalence of electronic or computer-mediated communication with others is closely related to both types of interruptions. On the one hand, typical synchronous and asynchronous communication programs such as email and chat include electronic alerts to notify users of incoming messages. Some people tend to immediately check and respond to these notifications, which then become external interruptions. On the other hand, the majority of computer users tend to keep email running in the background and intermittently check their inbox, regardless of their notification settings, thus engaging in voluntary self-interruptions (Renaud, Ramsay, & Hair, 2006). The extent to which individual work is currently embedded in collaborative endeavors explains the decision to be constantly available to others (on-call) and/or the need to wait for responses from others to continue one's work.

Multitasking During Meetings

Modern Information Technology platforms are both enablers and inducers of multitasking behavior. The flexibility to have multiple programs open *enables* people to switch between ongoing tasks and interleave their work. The availability of real-time notifications of events as they occur also *induces* task switching. The use of Information Technology in specific contexts, such as meetings, tends to hide multitasking behavior. While taking notes on a laptop, meeting attendees can seamlessly check their email or perform other activities on their computers. A large number of studies document the prevalence of multitasking in face-to-face meetings and in virtual meetings (Benbunan-Fich & Truman, 2009; Chudoba et al., 2005; Wasson, 2004).

In face-to-face meetings, the use of laptops for note-taking sometimes leads people to perform other computer-based activities unrelated to the meeting (Benbunan-Fich & Truman, 2009). As a result, two kinds of activities coexist: compliant and non-compliant. Meeting-compliant activities, such as looking up related information to clarify a point or ask a question, or note-taking, help participants acquire and process meeting-related information. Non-compliant activities (such as checking personal email or doing unrelated work) are typically considered distracting and detracting from the objectives of the meetings. These unrelated activities may give the illusion of personal productivity to meeting participants.

Electronic meetings are vulnerable to the same concerns, albeit to a larger extent. The lack of physical co-presence of meeting participants and the use of the computer as the medium to carry out the meeting, presents many opportunities for multitasking. This paradox was accurately captured by Malhotra, Majchrzak, Carman, and Lott (2001) in their study of a highly successful virtual team tasked with the design of a new product. On the one hand, the team realized that it did not have all the members' complete attention during their teleconferences, as most members participated from their offices and were vulnerable to interruptions coming from their own offices. The team settled for having the member's knowledge available when needed during the course of the electronic meeting. On the other hand, members were allowed to perform multiple tasks simultaneously (i.e. while the meeting was in progress). This enabled members to analyze designs during meetings using their powerful desktop packages. As a result of this "just-in-time analysis", members were able to provide immediate feedback on the feasibility of the proposed ideas, making the team more efficient and effective.

Integration of the Literature

Individual multitasking behavior is the result of multiple demands placed on people stemming from their own work, as well as their participation in collaborative endeavors. There is an illusion of productivity associated with task switching because this behavior allows people to keep working on something else when there is a blockage that prevents the completion of the current task, or when they need to attend a slow and boring meeting. These perceptions of productivity increase are not always associated with performance gains (Appelbaum et al., 2008).

Although seemingly different, these two streams of research – Multiple Team Membership and Multitasking – have many aspects in common, particularly at the individual level. By definition, a person who belongs to multiple teams at the same time will have to accomplish a set of tasks emerging from each one of those memberships in the same period. This would lead to task switching. Similarly, a person who is facing multiple demands (regardless of whether they come from a larger team endeavor or from his/her individual pursuits) would have to interleave tasks to complete them. Therefore, both lead to task switching.

Figure 1 shows a summary of the two literature streams examined in this review: Multiple Team Membership and Multitasking. In the extant literature, these two streams have run in parallel, even though there are some potential areas of overlap.

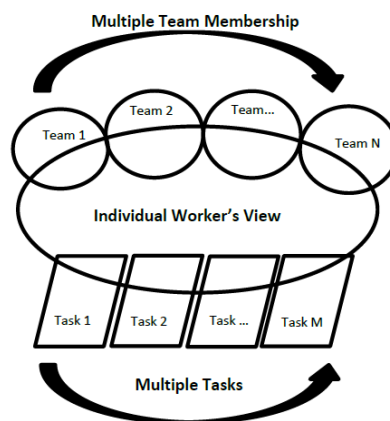


Figure 1: Multi-team membership and multitasking.

RESEARCH METHODS

In order to gain a better understanding of what occurs under situations of multiple task demands, we conducted focus groups. This method is particularly appropriate to provide an in depth exploration of a topic (Stewart & Shamdasani, 2014).

Three focus groups, including a total of 54 participants, were convened with different sets of students. (One undergraduate and two graduate sessions were held). By restricting the focus group participants to specific populations of students, we were able to investigate three different scenarios: a group where students are members of multiple teams (12 students), a cohort group where students belong to very few teams (25 students) and a restricted cohort with students

working with the same team for all of their group assignments (17 students). In all cases, students have to complete their individual work as well.

The same procedure was followed in each case. Recruited participants individually filled out an online form with their answers to open ended questions about group membership and multitasking activity. This initial step allowed us to collect complete and independent individual responses to each question, avoiding influences from other participants. Following individual participation, there was a group-based discussion of each question. The focus group protocol is shown in Table 1.

Define "multitasking" and describe an instance where you have been multitasking.

How many different teams do you belong to for your schoolwork this semester/term?

How do you normally meet with your teammates (Face-to-Face, electronically, both)? If electronically, describe the mode of communication you use (Skype, teleconferencing, Discussion Board, etc.)

Describe briefly a typical group meeting. Do you multitask during group meetings? If so, describe how.

How do you prioritize and distribute your time between your individual tasks and those that result from working in teams?

Have you ever multitasked as a result of belonging to team(s) for your schoolwork? If yes, explain how.

Does multitasking affect your personal productivity and performance? Does it affect team outcomes?

Table 1: Focus group protocol.

Data Analysis

A parse and identify approach (called "scissor and short" by Stewart and Shamdasani (2014) was followed to analyze the data. Based on the protocol questions, we developed a classification system for the major issues and identified material in the transcripts related to each topic. After several passes through the transcripts, we combined categories in themes and patterns. These themes guide the presentation of results in the next section.

RESULTS

The analysis of the focus group data offered important insights regarding the types of tasks that are usually combined as a result of individual and group work; the nature of multitasking resulting from multiple team demands; some of the factors that contribute to the method of multitasking; and the perceived success of multitasking activities.

Taxonomy of tasks

Based on the results of the focus groups, we learn that the nature of group work is actually twofold. Therefore, we are able to divide group work into two varieties (joint and individual). Participants indicated that at some stages of a group project, all team members work together in real time or semi-real time to plan, discuss, and/or make decisions. During these times, participants will meet

either face-to-face or electronically to brainstorm, assign task to individual team members, and/or work on pulling the project components together into a seamless whole. At other stages of the project, participants work individually on the individual tasks that they have been assigned and will contribute to the team effort. Although both of these activities can be considered group work, there is a marked difference between them in that the individual tasks can be done, to some extent, at the convenience of the participant, while the group tasks must be done at a coordinated time. Care must be taken not to confuse these individual tasks with individual tasks that a participant must complete for her own purposes that are not related to the goals of the group. These tasks are similar because they can also be done at the participant's convenience; however they afford even greater liberties because their timing and outcome is not tied to the timeframe and objective of the larger project plan.

Based on the above findings all tasks are divided among three levels. At the group level a group of people collectively perform a task, meeting together in person or electronically to jointly accomplish their goal in real time. We refer to these as **group tasks**. At the individual level, individuals perform personal tasks that are not related to any group or joint activity. We refer to these as **individual tasks**. In between group and individual levels there is a unique blend of the two that involves individuals completing tasks on their own time toward the completion of a group project. We refer to these as **project activities**. To summarize, in Table 2 we describe these different types of tasks:

	Performed by...	Goal	Timing
Group tasks	Group	Group outcome	Group Synchronous
Project activities	Individual	Group outcome	Individual within group schedule
Individual tasks	Individual	Individual outcome	Individual

Table 2: Task profiles.

The focus groups have indicated that the way that participants approach the demands of their multiple team tasks seems to vary a great deal based upon the type of group tasks that are being performed.

Multi-Team Membership and Multitasking

Although many participants claimed that they have multitasked in response to their multiple team membership, participants were not always describing the same variety of multitasking. Multitasking varied based on the types of tasks that were being performed together. Based on the anecdotes and descriptions of multiple group multitasking and the extrapolation to all scenarios we are able to conceptualize the varieties of multitasking based on the combination of tasks that are being done simultaneously. Each type of task could potentially be combined with each of the other types of tasks resulting in six possible combinations, each describing a type of multitasking. For example, group tasks could potentially be combined with other group tasks. This is very rare,

if not impossible, as it requires interacting synchronously with two different groups at the same time. In contrast, individual tasks and project activities which are done on an individual's own time are much more commonly combined with each other. See Table 3 which tabulates these task combinations and reports on the level of frequency of each in our focus group samples. Since the combinations are non-directional, only the bottom half of the table is filled out. The upper half is shaded.

	Group Task	Project Activities	Individual Tasks
Group Task	Very rare	-----	-----
Project Activities	Rare	Common	-----
Individual Tasks	Common	Common	Very common

Table 3. Occurrence levels of task combinations

Upon further examination of the data, there seemed to be a difference between the accounts of multitasking involving each of the different task combinations. According to many of the focus group participants, group tasks seem to enjoy somewhat of a unique status as a result of which many were less likely to combine them with other tasks. Participants indicated that during group tasks they need to stay focused on the group to prevent confusion. This is especially true when combined with other group tasks (for different groups) as only a rare few exceptional cases indicated participating in two group tasks at once. (Those participants noted that this is difficult to accomplish and not ideal.) It was also noticeable in combination with the individual level tasks (project activities and individual tasks). Although multitasking during group meetings is a prevalent occurrence (Benbunan-Fich & Truman, 2009; Stephens & Davis, 2009), which was supported by our participants' accounts, many participants reported that they refrain from multitasking during group tasks to help maintain their focus on the group activities.

On the other hand, there was more widespread disclosure of other types of multitasking combinations. For example, participants indicated that while they do their project activities they do individual tasks (like checking their e-mail, social networks, and listening to music) or project activities for their other groups.

Looking at the frequency of each type of multitasking in Table 3 we can notice that the more flexibility a given type of task permits, the more likely participants were to engage in multitasking, combining it with another group. Thus, the individual task-individual task combination is the most common and the group task-group task combination is the least common. Project activities combined with other types of tasks are common but since project activities are still tied to the goal of the group, they require somewhat more focus.

Individual Roles in Group Meetings

Analysis of the focus group data offered insights into the ways in which individuals perform group-related activities at the individual level during group tasks. This type of phenomenon is consistent with the observations regarding “just-in-time” analysis discussed by Malhotra *et al.* (2001). In our

focus groups, upon being asked about multitasking as a result of group work, many participants reported that during their group meetings, several different tasks (related to the group work) might be occurring simultaneously throughout the meeting. For example, during face-to-face group discussions, some participants might be conducting some research on specific issues while another is writing. This instance is not to be confused with individual multitasking during group meetings where individuals complete individual tasks *not related* to the group task during the group meetings, which has been discussed extensively in multitasking literature (Benbunan-Fich & Truman, 2009; Stephens & Davis, 2009; Wasson, 2004). Technically, this would not be an instance of multitasking, given that the individuals' tasks are pursuing the same goal that drives the work of the group.

Doing parallel group-related work within a meeting highlights how groups leverage individual skills or roles to maximize their efficiency. As supported by the remarks of focus group participants, concurrence of individual roles during group tasks can potentially increase the productivity of the group as well as boosting the quality of the results by creating synergy. As an example, one participant discussed "multitasking" during group meetings as individuals completing their own tasks and then helping each other out. In this account all individuals within a group had their own assignments and were working towards the same goal. Such collective work also helps to motivate the group members to maintain focus on the project, and provides the group an opportunity to check each other's work and produce better quality results.

Perceptions of Outcomes

In contrast to the outcomes of related multitasking during group meetings, which are likely to be more positive, the focus group data was more inconclusive regarding the impact of other types of task combinations. Participants in the focus groups seem to be split between those who reported that multitasking is beneficial to their outcomes in that it allows them to accomplish more in a shorter amount of time and those who reported that multitasking caused them to lose some focus on some of their tasks causing poorer quality work. Some participants actually mentioned that both outcomes occur simultaneously. Still others felt that the multitasking had no real impact on outcomes. Despite the different opinions, a number of participants described multitasking as being overwhelming.

It is possible that the varied attitudes toward multitasking are contingent upon the type of task combinations that are being undertaken. For example, one participant who describes multitasking outcomes in a negative light admits to having checked email messages during group meetings (group task-individual task combination). In contrast, a number of participants who have multitasked among several individual assignments do not seem to be negatively impacted. In fact, they appear to be empowered by the ability to multitask, progressing on many tasks at once.

Still, this is not always the case. We have come across some participants who have also checked email messages during group meetings who claim to have not been negatively impacted by this activity. Clearly there are some individual factors at play.

Multitasking as a Skill

In assessing the outcomes of their work, many participants alluded to another interesting idea that emerged from the focus groups -- the concept of multitasking as a skill. Many participants talk about the "right way" of multitasking or about being "able to" multitask or to control their level of multitasking, indicating that a person could be better or worse at multitasking. Generally, multitasking is viewed as the act of switching between multiple tasks or doing them simultaneously, and either a person multitasks or doesn't. Multitasking literature has discussed the "how" and "why" of multitasking, differentiating between different frequencies and varieties of task switches (Benbunan-Fich et al., 2011). The insight revealed by the focus group data is that perhaps the choice of how multitasking occurs is a cognitive decision that, along with individual skills, determine the impact of the multitasking on outcomes.

Furthermore, the focus group results give us additional insight into how people might apply the "skill" necessary to multitask "well". Some of the focus group participants actually discuss the multitasking tactics that they use for successful multitasking. For example, one participant assesses the level of focus needed for two tasks before deciding whether or not to take them on simultaneously. Another advises focusing completely on each task even while switching between them (i.e. not letting the pending task and the upcoming switch distract from the focus on the current task). A third describes not taking on more tasks at once than he can handle without affecting performance. This suggests some limits to the juggling of multiple tasks. Further research in this area might focus on what cognitive choices people have and make when faced with opportunities that require multitasking and how it affects their experience.

Deadlines and Accountability

In addition to the potential "multitasking skill", two explicit factors contributing to the choices that people make about how to complete all of their group and individual tasks also surfaced during the focus groups. In describing the way that they prioritize their many group and individual tasks, many participants described both deadlines and accountability as drivers of the priorities that they assign to their tasks. Once again, the distinction between project activities and individual tasks comes into play. A majority of participants indicated that in prioritizing their tasks they would first complete those related to the group work because they are aware that their group depends on them. Individual tasks, for which there is no group-based accountability, typically have more flexibility and can be worked around those.

In addition, the urgency of the tasks, for many participants, helped determine how it was included within multitasking, with closest deadlines worked on first or more. This is consistent with the literature suggesting that pending deadlines contribute to raise the level of priority and to accelerate the pace of group work (Waller et al., 2002). It stands to reason further that multiple team membership with close project deadlines (i.e. at the end of the semester) increases the levels of multitasking as people try to comply with the urgent requirements of multiple teams.

Still, other participants undertook the tactic of dividing their time equally between tasks or tackling the most time consuming projects first.

These observations are important factors in understanding how individuals address the demands of belonging to multiple groups along with other responsibilities. It is clear that individuals are very aware of the difference between project activities and individual tasks and approach them

accordingly. Accountability to the group and the need to be prepared and to coordinate with the group for each group task creates an informal deadline within the course of the project, boosting the priority of the group-related activities.

DISCUSSION

Analysis of the information shared during the focus groups has given us a broad picture of the perspective of the modern individual worker who has many group and individual demands. As expected, multitasking plays a large part in that picture and we have been able to profile that multitasking to better understand it.

Using the concept of working spheres (i.e. sets of thematically connected activities), proposed by Gonzalez and Mark (2005) and the results of our study, we can articulate different instances of multitasking levels, which can be divided into two categories: across-levels and within-levels. The results of the focus groups clearly identify three main levels of activities: individual tasks, project-related activities for which the individual has direct responsibilities, and group meetings. Any combination of these levels is possible, though some are more frequent than others, as discussed previously. Figure 2 shows a graphical representation of the three levels.

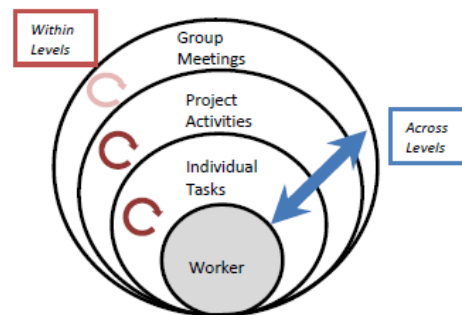


Figure 2: Multitasking across and within levels.

Inherent in this classification, is the articulation of the project-level which helps to bring together the multi-team membership perspective and the individual task view typical of multitasking research. (See Figure 1). In fact, with the identification of project-related activities stemming from team membership, traditional individual tasks can be separated into independent and joint endeavors. The former is not related to any team to which the individual may belong, while the latter is the direct result of team membership and specific group deliverables. These characteristics have shown to be significant for individuals' attitudes, choices, and outcomes as they prioritize and combine the many tasks that they encounter.

The results of our focus groups have highlighted the very different natures of individual-, project-, and group level activities in terms of how they are combined, prioritized and perceived. In this light, it behooves us to be aware that increases in the number of each type of task are not equivalent. When individuals become members of multiple groups, the effect is that the number of project-related activities that they have to accomplish is multiplied. This will have a very different impact on the individual's time and resources than an increase by the same amount in individual tasks.

The necessary focus, coordination, and urgency have been shown by our study to be more demanding at the group level. In turn, the nature of multitasking is impacted as well. Further research in this area might confirm and further explore this likelihood.

Due to the exploratory nature of our research activity, we cannot draw any absolute conclusion from the analysis we have conducted. However, the focus groups do highlight some of the real experiences that members of multiple teams have encountered that caused them to multitask with positive or negative results. From these experiences we have gained valuable insight into the nature of multitasking in multiple group membership.

CONCLUSIONS

In an era where both multitasking and multiple group membership are increasingly common, it is important for us to understand the resulting demands on individuals. The current study has illustrated these demands and has revealed how multi-team membership and multitasking influence one another. The interaction of these two concepts is worthy of further exploration. This study contributes to the literature by forging a unique link between prior work in the area of multitasking and that in the area of multiple team membership. Based on this analysis the intersection between these two streams of research is fertile ground for future research to further expose the underpinnings of the success of the multitasking multiple-group member.

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